

CLAIMS

1. Cylinder head gasket comprising a gasket plate for an engine in which at least one first coolant cavity with coolant flowing therethrough is formed in an engine block adjacent to the cylinder head gasket, at least one flow conducting element for the coolant being provided on the cylinder head gasket so as to protrude from the gasket plate of the cylinder head gasket, and the gasket plate comprising coolant passage openings via which the at least one first coolant cavity is connectable to at least one second coolant cavity formed in a cylinder head of the engine, wherein the at least one flow conducting element is of such configuration and is joined to a coolant passage opening in such a way that the flow conducting element forms a flow path with the coolant passage opening and is designed so as to engage in at least one of the first and second coolant cavities and to generate a directed flow of coolant at an outlet end of the flow path.
2. Cylinder head gasket in accordance with Claim 1 for an engine in which coolant flows through the at least one first coolant cavity such that at least in an area of this coolant cavity a main flow component of the flow of coolant runs approximately parallel to the gasket plate, wherein the at least one flow conducting element is designed so as to engage in the first coolant cavity and to form, when the cylinder head gasket is installed, such an impingement and deflector surface for the main flow component that a flow of coolant directed transversely to the gasket plate enters the coolant passage opening associated with the flow conducting element.

3. Cylinder head gasket in accordance with Claim 1, wherein the at least one flow conducting element is designed so as to engage in the second coolant cavity and is provided at the outlet end of the flow path with a nozzle for generating a directed jet of coolant in the second coolant cavity.
4. Cylinder head gasket in accordance with Claim 2, wherein the at least one flow conducting element is designed so as to engage in the second coolant cavity and is provided at the outlet end of the flow path with a nozzle for generating a directed jet of coolant in the second coolant cavity.
5. Cylinder head gasket in accordance with Claim 1, wherein at least in an inflow area the flow conducting element is designed like a guide vane.
6. Cylinder head gasket in accordance with Claim 1, wherein at least in an inflow area the flow conducting element is of tube-shaped design.
7. Cylinder head gasket in accordance with Claim 1, wherein the flow conducting element is manufactured as a separate part and attached to the gasket plate.
8. Cylinder head gasket in accordance with Claim 5, wherein the gasket plate comprises at least one sheet metal layer out of which a guide vane-like section is bent in the area of a coolant passage opening.

9. Cylinder head gasket in accordance with Claim 8, wherein the guide vane-like section forms on the gasket plate a pocket or scoop opening in a direction approximately parallel to the plane of the plate and continuing integrally at its sides and at its base into the sheet metal layer.
10. Cylinder head gasket in accordance with Claim 3, wherein the gasket plate comprises at least one sheet metal layer out of which the edge area of the coolant passage opening is bent and thereby forms a tube-shaped and/or nozzle-shaped flow conducting element.
11. Cylinder head gasket in accordance with Claim 6, wherein the gasket plate comprises at least one sheet metal layer out of which the edge area of the coolant passage opening is bent and thereby forms a tube-shaped and/or nozzle-shaped flow conducting element.
12. Cylinder head gasket in accordance with Claim 8, wherein the gasket plate is multilayered and comprises a sheet metal layer consisting of low-alloy steel, and the flow conducting element is formed by a shaped area of this sheet metal layer.
13. Cylinder head gasket in accordance with Claim 9, wherein the gasket plate is multilayered and comprises a sheet metal layer consisting of low-alloy steel, and the flow conducting element is formed by a shaped area of this sheet metal layer.

14. Cylinder head gasket in accordance with Claim 10, wherein the gasket plate is multilayered and comprises a sheet metal layer consisting of low-alloy steel, and the flow conducting element is formed by a shaped area of this sheet metal layer.